SOV/137-58-9-19563

New Developments in the Electrolytic Polishing of Metals and Alloys

it eliminates the need for a tight control of the state of the electrolyte and the conditions of the process. The compositions of the electrolytes and the process conditions for electrolytic polishing for the production of a glossy surface without traces of pitting for Al, 1Kh18N9, and 3Kh13 grades of steel are adduced.

K.G.

1. Metals--Processing 2. Electrolytic polishing--Development 3. Electrolytes --Properties

Card 2/2

sov/123-59-15-59836

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 132 (USSR)

AUTHOR:

Fedurkin, V.V.

TITLE:

Electrolytic Polishing of Metals With Current Reversal

PERIODICAL:

Materialy po obmenu opytom 1 nauchn, dostizh, Vses. n.-i. in-t med.

instrumentariya i oborud., 1958, Nr 4 (29), pp 91 - 98

ABSTRACT:

The article has not been reviewed.

Card 1/1

OSIPOVA, Ye.V.: PEDURKIN, Y.V.

Chrome plating gauges as a method for making the dimensions of molded cylinders more uniform. Med.prom. 12 no.4:43-46 Ap '58. (MIRA 11:5)

1. Vaesoyuzuyy nauchno-issledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya.

(SYRINGES) (GAUGES)

FEDURKIN. V.V.; VASIL'YEVA, G.S.; SOLOMINA, Ye.P.

Themical removal of fats from steel and brass parts before electroplating. Med.prom.SSSR 12 no.5:15-19 My '59.

(NIRA 11:5)

1. Vassoyuznyy nauchno-isaledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya.

(METAL CLEANIN;) (ELECTROPLATING)

FEDURKIN, V.V.

Electrolytic polishing with reversal of current. Med.prom.
12 no.10120-26 0'58

(MIRA 11:11)

1. Vsesoyuznyy nauchno-isaledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya.
(SIRCTROLYTIC POLISHING)

PODGURSKIY, LV., FEDURKIN, V.V., SOLOMINA, Ye.P.

Witriding steel medical instruments for decoration and protection.

Med.prom. 12 no.11:27-33 N 58 (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel¹skiy institut meditsinskogo instrumentariya i oborudovaniya.

(MEDICAL INSTRUMENTS AND APPARATUS)

(CASE HARDENIEG)

PHDURKIN, V.V.; MESTERENKO, A.T.; KOVSHAROVA, L.A.; RAZUMOVSKAYA, Ye.I.;

OSIPOVA, Ye.V.; VASIL'IEVA, G.S.; PEKARSKIY, M.D., otv.red.;

ZVORONO, B.P., zamestitel' otv.red.; BOLDYREV, B.V., red.; VOLODIN,

Ye.A., red.; DANIL'CHENKO, Ye.P., red.; ORSKIY, I.N., red.; MISHIN,

L.N., red.; FREYDIN, G.S., red.; TSEPELEV, Yu.A., red.

[Technological instruction material; aluminum and aluminum alloys for medical articles] Rukovodiashchie tekhnicheskie materialy; aliuminii i aliuminievye splavy dlia meditainskikh izdelii. Moskva, M-vo zdravookhraneniia, 1959. 70 p. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel skiy institut meditsinskogo instrumentariya i oborudovaniya.

(MEDICAL INSTRUMENTS AND APPARATUS) (ALUMINUM)

KULAGINA, V.N.; PANCHENKO, S.M. [deceased]; FEDURKIN, V.V.

Hew pastes for the mechanical polishing of metals. Med.prom. 13
no.9:51-54 S '59.

1. Vsesoyuxnyy nauchno-issledovatel'skiy institut meditsinskogo
instrumentariya i oborudovaniya.

(POLISHES)

FEDURKIN, V.V.; REKANT, N.B.; BOROZDINA, M.S.

Producing aluminum mirrors by electrolytic polishing. Med.prom. 13 no.10:46-51 0 59. (MIRA 13:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya, Energeticheskiy institut Akademii nauk SSSR i zavod "Elektrosvet" imeni Yablochkova.

(MIRRORS) (ELECTROLYTIC POLISHING)

SMIRNOV, I.P., kand. tekhn.nauk, otv. red.; PEKARSKIY, M.D., kand. tekhn. nauk, zam. otv. red.; BOLDYREV, B.V., red.; VOLODIN, Ye.A., red.; GAYSINSKIY, B.Ye., red.; DANIL'CHENKO, Ye.P., red.; KABATOV, Yu.F., red.; KALANTAROV, K.D., red.; MISHIN, L.N., red.; ORSKIY, I.N., red.; FEDURKIN, V.V., red.; TSEPELEV, Yu.A., red.

[Materials of the scientific session devoted to the 25th anniversary of the All-Union Scientific Research Institute for Medical Instruments and Equipment] Materialy nauchnoi sessii, posviashchennoi 25-letiiu VNIIMIO. Moskva, 1962. 65 p. (MIRA 17:2)

l. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya. 2. Zame-stitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo instituta meditsinskogo instrumentariya i oborudovaniya (for Pekarskiy). 2. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta meditsinskogo instrumentariya i oborudovaniya (for Smirnov).

MATONOV, O.M.; FEDUROV, V.V.

Role of polyphenoloxidate from the kitneys of animals in polyphenol and ascorbic acid oxidation. War. bickhim. zhur. 37 nc.4:589-594 465. (MIRA 18:9)

1. Kafedra bickhimii Kiyevakogo meditsinskogo instituta.

FEDUS! I.P., burovoy master			
We have drilled the d no. 12:17-18 D '60.	eepest well in the Kuban.	Weftianik 5 (MIRA 13:12)	
1. Krasnodarskiy sovnarkhos. (KubanOil well drilling)			
s - 1-1-1 market and the second secon	and the second s		

FEDUSHCHAK, M. Yu.

Cand Geol-Min Sci - (diss) "Conditions for the formation of the exotic conglomerates of the Vorotyshchenskaya series of the Trans-Carpathian region." L'vov, 1961. 15 pp; (Ministry of Higher Education Ukrainian SSR, L'vov State Univ imeni Ivan Franko); 150 copies; price not given; (KL, 5-61 sup, 181)

FEDUSHCHAK, Mikhail Yur'yevich; LADIZHENSKIY, M.R. [Ladyzhens'kyi, M.R.], prof., otv. red.; MEL'NIK, G.F. [Mel'nyk, H.F.], red. izd-va; DAKHNO, Yu.B., tekhn. red.

[Formation of exotic conglomerates in the Vorotyshcha series of the cis-Carpathian region]Umovy utvorennia ekzotychnykh konglomerativ vorotyshchens'koi serii Peredkarpattia. Kyiv, Vyd-vo Akad. nauk URSR, 1962. 110 p. (MIRA 16:1) (Carpathian Mountain region—Conglomerate)

ROSKOSH, Ya.T.; SEN'KOVSKIY, Yu.N.; FEDUSHCHAK, M.Yu.

and amount of the second secon

Celestine from Carboniferous and Cretaceous sediments in the Volyn'-Podolian Plateau. Min. abor. no.17:232-236 163.

(MIRA 17:11)

1. Institut geologii i geokhimii goryuchikh iskopayemykh AN UkrSSR.

BUROV, V.S.; FEDUSHCHAK, M.Yu. Finds of coal pebbles in the Polyanitsa sediments of the Pokutye Carpathians. Dop. AN URSR no.4:507-510 '65. (MIFA 18:5) 1. Institut geologii i geokhimii goryuchikh iskopayemykh AN UkrSSR.

FEDUSHIN, A.V.

Pathogencity and immunity in helminthiases of game birds. Trudy Probl. i tem. sov. no.9: 330-337 '60. (MIRA 13:9)

1. Omskiy sel'skokhosyaystvennyy institut im. S.M. Kirova.
(Parasites--Gallinae) (Worms, Intestinal and Parasitic)

FEDYAKIN, M.V.

Home made school appliances in chemistry in the schools of Omsk. Khim.v shkole 14 no.5:93-94 S-O '59. (MIRA 12:12)

1. Pedagogicheskiy institut g.Omska. (Omsk--Chemistry--Study and teaching)

FEDYAKIN, M.V.

Deficiencies in the training and amount of knowledge of chemistry students. Khim.v shkole 15 no.1:43-46 Ja-F '60.

(MIRA 13:5)

1. Pedagogicheskiy institut g.Omska. (Chemistry-Study and teaching)

Training of young pioneers by a chemistry teacher. Khim. v shkole 16 no. 3:80-82 My-Je '61. (MIRA 14:5)

1. Pedagogicheskiy institut, Omsk. (Chemistry—Study and teaching)

FEDYAKIN, M.V.

Chemical problems in a chemistry course for secondary schools.

Khim. v shkole 17 no.2:32-36 Mr-Ap '62. (MIRA 15:3)

1. Pedagogicheskiy institut imeni A.Gor'kogo, Omak. (Chemistry—Study and teaching)

FEDYAKIN, M.V.

Shortcomings in the preparation of homemade audio-visual aids. Khim. v shkole 18 no.1:56-59 Ja-F '63. (MIRA 16:4)

 Pedagogicheskiy institut imeni A.M.Gor'kogo , g. Omsk. (Chemistry—Audio-visual aids)

TSLAF, N.Z. uchitel; GONCHARENKO, A.S. (Alma-Ata); GAPONENKO, I.M. (Novozybkov); SHEVCHENKO, T.T., uchitel; PASHAYEV, E., uchitel; khimii; FEDYAKIN, M.V., (Omsk)

Editor's mail. Khim. v shkole 18 no.1:81-83 Ja-F 163. (MIRA 16:4)

1. Srednyaya shkola No.5, Moskva (for TSlaf). 2. Srednyaya shkola No.1, g. Bolekhov, UkrSSR (for Shevchenko). 3. Kurkenskaya shkola Dagestanskoy ASSR (for Pashayev).

(Chemistry—Experiments) (Chemical apparatus)

FEDYAKIN, N. N.

"The thermodynamic equilibrium of a saturated water vapor in capillary-porous bodies during the sorption process." Min Higher Education USSR. Moscow Technological Inst of the Food Industry. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Science).

SO: Knizhnaya letopis', No. 16, 1956

FEDYOKIN, N.N.

USSR/Physical Chemistry - Surface Phenomena, Adsorption, Chromato-

graphy, Ion Interchange.

B-13

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3986.

Author : N.N. Fedyakin.

Inst : Moscow Institute of Food Industry.

Title : Surface Tension of Liquids in Microcapillaries.

Orig Pub: Tr. Mosk. in-ta pishch. prom-sti, 1957, vyp. 8, 37-41.

Abstract: In order to study the properties of water in microcapillaries, the author immersed a cylindrical capillary sealed at one end with the open end in water and measured, how much water rose in it compressing the air. Also, the speed of the meniscus rise was measured in open capillaries of the same radius r. It is shown that in all capillaries of radii up to 0.038, the surface tension and viscosity remain the same as those

of volumetric (sic!) water.

Card : 1/1

-1-

redy aking, 16.16

USSA/PREDMEDITOR: RELEASE (a Moindayne July/G1012000, ChCIA+RDP86-00513R0004128 graphy, Ion Interchange. B-13

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3989

Author : N.N. Fedyakin.

Inst : Moscow Technological Institute of Food Industry.

Title : Wetting of Adsorption Layers.

Orig Pub: Tr. Mosk. tekhnol. in-ta pishch. prom-sti, 1957, vyp. 8,

42-46.

Abstract: A new, dynamic method of measuring the border angle θ based on measuring the speed of the liquid motion in capillaries is proposed. It is shown that the film remaining after the water column moving in the capillary and 45 to 50 A thick has the properties of the water mass and is completely wetted by water. The clean glass surface covered only with the adsorbed air film is also completely wetted. But should there be on the glass an adsorption film of water not more than few molecular layers

Card : 1/2

S/139/60/000/005/008/031 E073/E135

AUTHOR:

Fedyakin, N.N.

TITLE:

Sliding of Water Vapour Along Walls of a Capillary

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No. 5, pp 50-54

TEXT: The author measured the intensity of movement of water vapour in capillaries of 0.5-3 microns radius. The diameter was measured by means of a microscope. After the experiment several short pieces were cut from the capillary for microscopic investigations; the measuring errors did not exceed 3-10%, however, the average values were still closer to reality due to the fact that a large number of measurements were made. For measuring the intensity of movement of water vapour in the capillary the speed of evaporation of water was measured for a capillary with a vacuum $i = \Delta \ell/\Delta T$ where $\Delta \ell$ is the length of the water column evaporating in a capillary during the time ΔT (usually $\Delta \ell$ was chosen to be of the order of 0.1 mm). Curves of the evaporation intensity as a function of the distance between the meniscus and the edge of the capillary for a given temperature for 6 capillaries for the temperature t = 48 °C are Card 1/2

\$/139/60/000/005/008/031 \$073/E135

Sliding of Water Vapour Along Walls of a Capillary

plotted in Fig. 1. The evaporation intensities were measured for various capillaries at the temperatures 20, 39, 48, 56, 64, 72, 80 and 90 °C. On the basis of the experimental results the following conclusions are arrived at: 1) In movements of water vapour in capillaries with radii approaching the free mean path of the molecules the sliding at the neighbourhood of the walls plays an important part. 2) The viscosity of the steam in the capillary depends on the pressure; the sliding coefficient remains constant with increasing viscosity. 3) When the viscosity coefficient reaches its normal value the sliding coefficient starts decreasing. 4) For capillaries r > 0.77 microns the theory of Baule (Ref. 4) is applicable for calculating the sliding coefficient at pressures of a few mm Hg.

There are 5 figures and 7 references: 6 Soviet and 1 German.

ASSOCIATION:

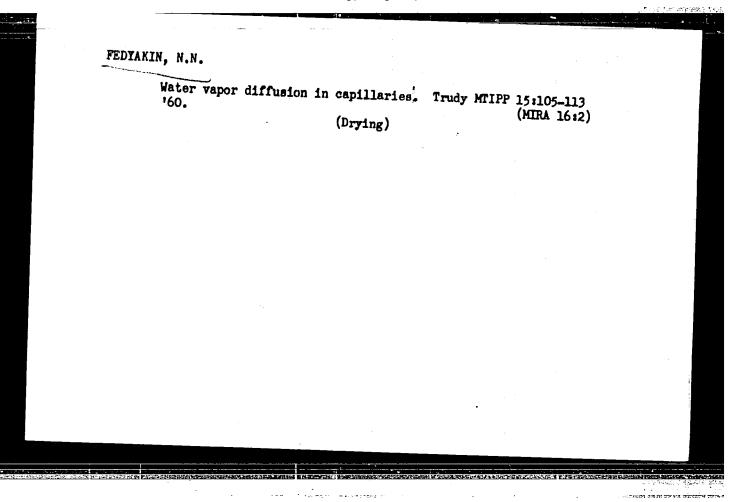
Kostromskoy tekstil*nyy institut

(Kostrom Textile Institute)

SUBMITTED:

October 26, 1959

Card 2/2



26.2/81

S/139/61/000/002/012/018 E032/E414

AUTHOR:

Fedyakin, N.N.

TITLE:

The Motion of Water Vapour in Microcapillaries

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika,

1961, No.2, pp.114-119

The equation describing the motion of vapour or gas in TEXT: capillaries can be shown to be (Ref.1. K.F.Gertsfel'd) of the form

$$t = \frac{\Delta p_{\ell ep}}{8 \, \eta l} \left(1 + \frac{4 \, \sigma}{r} \right) r^2, \tag{1}$$

i is the mass of gas passing through unit area per unit time, Δp is the pressure difference between the ends of the capillary, ρ_{cp} is the average gas density, η is the viscosity, ℓ is the length of the capillary, r is its radius, and σ is the slip coefficient. Assuming that

Card 1/9

$$\sigma = \frac{2r\Delta r + \Delta r^2}{4r},\tag{2}$$

21517

The Motion of Water ...

S/139/61/000/002/012/018 D032/E414

Eq.(1) can be reduced to

$$l = \frac{\Delta p \rho_{cp}}{8 \, \eta l} \, (r + \Delta r)^2. \tag{3}$$

Fig.1 shows $i^{1/2}$ as a function of r for saturated water vapour. These results were obtained by measuring the rate of evaporation of water at 20°C for various depths in the capillary. The intercept on the r axis (which is equal to Δr and remains constant up to 50°C) was found to be 0.84 μ . In the case of microcapillaries where $r \ll \Delta r$, Eq.(2) can be replaced by

$$\sigma = \frac{\Delta r^2}{4r} \tag{4}$$

so that

$$l = \frac{\Delta p \rho_{\rm cp}}{8 \, \eta l} \left(1 + \frac{\Delta r^2}{r^2} \right) r^2$$

Card 2/9

The Motion of Water ...

21517 S/139/61/000/002/012/018 E032/E414

or, approximately,

$$I = \frac{\Delta p \rho_{\rm cp}}{8 \, \eta l} \, \Delta r^2 \,. \tag{5}$$

Thus in the case of microcapillaries the rate of evaporation, or the amount of material passing through a unit area per unit time, is independent of the radius of the capillary. The amount of matter passing through a given section of the capillary in a given time is then given by

$$M = \frac{\pi \Delta p \rho_{cp} \Delta r^2}{8 \, \eta l} r^3. \tag{6}$$

In order to verify Eq.(5) to (6) experimentally, the present author measured the rate of evaporation of water from capillaries having radii between 0.24 and 0.021 μ as a function of distance of the meniscus from the end of the capillary. Using ultra-microscopic methods, one can observe capillary radii \langle 0.01 μ . The air-filled Card 3/9

21517

The Motion of Water ...

7/139/61/000/002/012/018 3032/E414

capillary channel scatters incident light ("imilarly to fine particles) and can be seen in the microscope as a bright band. On the other hand, a channel filled with the liquid does not scatter light to any great extent and cannot be seen through the microscope. In practice, one end of the capillary is sealed off and is placed for a very short time in a flame of a spirit lamp. The expansion of the vapour inside the capillary forms a pearshaped cavity at the end which can be filled by dipping the other end of the capillary into the liquid. A certain amount of liquid is then allowed to evaporate from the free end and the capillary is inserted under a microscope so that the meniscus can be seen in the field of view while the filled part is placed in a heater. As the temperature is increased, the liquid in the pear-shaped cavity expands and enters the channel of the capillary. result, the liquid-vapour boundary in the capillary is displaced. From a knowledge of the volume of the cavity V and measurements carried out under the microscope, one can calculate the radius of the capillary from the formula

Card 4/9

$$r = \sqrt{\frac{V\Delta t\beta}{\pi \Delta l}}$$

(7)

The Motion of Water ...

S/139/61/000/002/012/018 E032/E414

where β is the volume expansion coefficient (the measurements are actually carried out on a photograph obtained through the microscope). A standard scale is photographed on the same negative for calibration purposes. Fig.5 shows the rate of evaporation of water as a function of the distance of the meniscus. It is concluded that the rate of transport of vapour in capillaries with radii smaller than 0.09 μ is independent of the This means that in such capillaries the mass transport radius. across a given section of the capillary is proportional to the square of the radius, in accordance with Eq.(5). The slip coefficient in microcapillaries is inversely proportional to the The viscosity in microcapillaries has a constant value and is independent of the radius. Thus the coefficient of external friction is directly proportional to the radius of the capillary. Table 3 gives some of the numerical values obtained. from the measurements. The first column gives the radius in μ , the second column gives the length of the capillary, the third column gives the mass transport in g/cm2 sec, and the last column gives the viscosity in $g/cm \sec x 10^{6}$. There are 5 figures, Card 5/9

21517

The Motion of Water ...

S/139/61/000/002/012/018 E032/E414

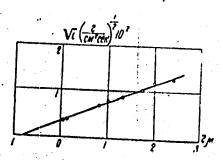
3 tables and 3 references: 2 Soviet and 1 non-Soviet.

ASSOCIATION: Kostromskoy tekstil'nyy institut

(Kostroma Textile Institute)

SUBMITTED:

June 30, 1960



Card 6/9 Fig.1.

FEDVAKIN, N. N. Diffusion of vapors in capillaries. Izv. vys. uch. zav.; fiz. 3: 82-92 '62. (MIRA 15:10) 1. Mostromskoy tekstil'nyy institut. (Vapors) (Diffusion) (Capillarity)

42707

26.1420

5/020/62/147/002/017/021 B101/B186

AUTHORS:

Deryagin, B. V., Corresponding Member AS USSR, Fedyakin, N. N.

TITLE:

Special properties and viscosity of liquids condensed in

PERIODICAL:

Akademiya nauk SSSR. Doklady, v. 147, no. 2, 1962, 403-406

TEXT: In a paper by the second author (Koll. zhurn., 24, 497 (1962)) it was reported that the water column in sealed capillaries gradually snortened and that a second water column formed having different properties from those of the original water. Such water columns with special properties can also be prepared in open capillaries if the relative humidity exceeds 93%. Here the viscosity of such secondary liquid columns was measured. For this purpose, a difference of pressure was generated at the ends of the capillary tube, the movement of the column was observed through a microscope at constant temperature, the velocity was determined as a function of the pressure difference, and the viscosity was then calculated by Poiseuille's equation. The experiments were made with ~ 1 mm long columns of water, acetone, or methanol in capillaries of $\sim 1\,\mu$ radius.

Special properties and viscosity...

S/020/62/147/002/017/021 B101/B186

It was found that after repeated movements of the column its velocity increased, i.e., the viscosity of the liquid decreased; after three or four movements it approached the normal value. The faster the movement of the liquid column the faster the viscosity dropped. As long as the normal value is not reached, the initial anomalous viscosity value might be restored after long standing. A limit shear stress 0'= 2 dynes/cm2 was calculated for water. The viscosity $\eta \cdot 10^2$ g/cm·sec of water in a capillary tube of 1.06 μ radius was 12.5 in the first movement and 1.2 in the second. For acetone, η_1 = 0.52; η_2 = 0.34 (capillary radius 1.4 μ). For methanol, the viscosity did not change, but a limit shear stress was found which disappeared as soon as the column had moved about 1 mm. Conclusions: In glass capillaries at equal temperature, two modifications of water can exist which differ in viscosity, thermal expansion, saturated vapor pressure, etc. These modifications are due to thickenings of the liquid layer adsorbed on the capillary walls with the help of the hydroxyl groups on the class surface. Densely packed molecular chains connected by H bonds are formed. The anomalous structure can be restored as long as the destruction of these H bonds by flowing does not exceed a certain degree.

Special properties and viscosity...

S/020/62/147/002/017/021 B101/B186

The occurrence of liquids with anomalous structure accounts for the fact that Kelvin's equation does not hold for capillary condensation, and determines the behavior of water in soil and porous substances. There are 4 figures and 1 table.

4

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

SUBMITTED:

June 2, 1962

Card 3/3

DERYAGIN, B.V.; TALAYEV, M.V.; FEDYAKIN, N.N.

Allotropy of liquids during condensation of their vapors in quartz capillaries. Dokl. AN SSSR 165 no.3:597-600 N *65.

1. Institut fizicheskoy khimii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Deryagin).

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000412810

FEDYAKIN, N.N.; DEHYAGIN, H.V.; NOVIKOVA, A.V.; TALAYEV, M.V.

TO THE PROPERTY OF THE PROPERT

Mechanism underlying the formation of water columns with particular properties in the condensation of water vapors in wide freshly drawn glass capillaries. Dokl. AN SSSR 165 no.4:878-881 D *65. (MIRA 18:12)

1. Institut fizicheskoy khimii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Deryagin).

		4						trate le of		8	sot	a a	å	ā	
	8	iy subclass	peredach 1 peredach gibioy styna'yu. Odesem, 1957	uchet, bengrutiventiay i isolowaliye predacti; tray manizatiii, ioo- hengin, Construction and Analysis of framenissions; framestions of the Con- frameso on Problems in heign, Construction and Analysis of Gear and Manible framenissimes, Wel 1) [Conses] Obsessiy politerih in-t, 1995. 199 p. 5,000 montan sythates.	maoring Agnatias: Buchmo-taihaiche shaye obabchestru madiamatroitel'say prograhemosti, Odesakoye shlastacya pravisativ, mad Ossakiy politelbaiche shy iastinat.	if.F. Hidforov, Engineer; Rob. Ed.; A. E. Konissavahni Editorial Bearli L.E. Berovich, Candidate of Rebaical Sciences, M.S. Balvoyev, Engineer, M.D. Geskir, Candidate of Trichical Sciences, I.E. Eshinasty, Candidate of Rob- tical Sciences (Sergia Ed.) 2. d. Zak, Candidate of Printical Sciences, E.G. Engines, Candidate of Embiliah Sciences, F. S. Enghyttery, Dector of Reb- ease, Sciences, W.E. M. 1999, Condidate of Rebaical Sciences, M.S. Publishing	1.1/8 Danifates of Bulmianl Sciences, and L.B. Brilith, Captinies of Bulmianl Ectonom.	COUNTAIN: This book is the first of three volumes dealing with the trussections of the conference. This first volume contains articles on the design and correspond to the contraction of particles and vorte generalize. The second volume treats flattlike transmissionally the third; theoretical not apprimental conjunct to the third sevent of the articles.	1	in the state of th	rection. sters	biguis, A.I. Invertigation of the Load Capacity of Baliah Coars hypersical invertigation, and data from speriments show that the load capacity of baliah gous can be 50 parcest greater that the load capacity of baliah gous can be 50 parcest greater that the transle, I.S. Bale Bookin of a Theoretical and Experimental Investigation of Bor Types of Worn Coar Trains the investigation show the advantages of worm means of this tree.	Active Parties	. J 84 2	
	\$602/A08	Leels down		13.00 of 6.00	antibos Odesekty	maker Rei Blyayer, Bekty, Car Petaloni Tavier,	odida to od	ine vita v mericia illa sectional cuperfess	Age commenced to	historally, I.A., Buttoni feleriton of Heplacement Cufficients and Martinities of Indiacement is been dears at Augular Correction With the fee of Lamilac-contour Magness than the fee of Lamilac feeders or Augular feeders by displacing the graphs (anglar servetton) for eleminac the maximum contest curently, healing streagth, and wear resistance with the aid of limiting contour diagrams.	Barrary, V.E. Limitiag-contour Ragman and Nuthole of Their Construction, Change in Contour Porm Dos to a Change in Caralia Geometrical Parameters Components of nextlimiting contour Liagrana, puch as interference, over- larging conflictors, millial clearance, and changes of tooth height, and commary reads of the bob tooth are discussed.	belowin, A.E. Investigation of the Load Copacity of Balland Coars Theoretical investigation, and dense from experiments above that the load capacity of beliand, genes can be 50 percent greater than tweet straight general. Entwales, I.E. Beant Beautic of a Theoretical and Experimental Investigation of the Types of Vorm Coart Thins The Types of Vorm Coart Thins The Types of Vorm Coart Thins The Investigation show the definitions of worm manner of the trees.	Paralia, B.Y. Mil. Sorthor's dearing tyrics. I brist spoopsis of Sorthor's system of partiag for spur gears, including construction of partias for encous and convex tests, is presented. The author claims that this system has a long 2 to 3 time greater than standard involve gearing systems. By plants.	Solow'ywe, A.E. Theoretical Packannichi of the Printics Analysis of defended by Transistant and Functioning Printing in Animalsian and Functioning Printing in Animalsian Printing of Generaliza waternia and the whole internised in The oritical beautiful in Printing in Truly contact beautiful and in African Solow in the transitation during management of Printing Internity in the transitation during management of the following the following and original and original printing included to the following the	
	POLICE POLICE	natys 1	1997	dechi un desiones and Abel Livelia is	salche et a	Tominary 1.5. T. Pallor (Carta of Carta	ritts, o	Section 1	1 1 1 1 1	Course of the co	a Geometri Ch as interest and a car	ry of Mary	Take for a series in the serie	Printic bols of I	
	MAN I BOOK INCIDENCE	netrila	30	of franction	g right r	A.: A. B. moses, E. make, Chapter, Chap	H	Lret wolls	1	of Maple cars at a lavolate misiat	is order	of Copacity of the Copacity of	Syrian of period or conce t tale avolute read by	als of the state o	
		chets, k	K. 786.	Analysis in Con	-terhatch	r Beh. I ton beta ton beta baten 9	lasons,	first of This fi		Piterton Piters O Prime ortion of) for obt	Places Obece Stour di Cleared Couts or	Late to the state of the state	Gearing ''s system refiles f laise the fundard f	A Reservice and a Reservice and a Section of the tra	
			क्ष्मिक स्ट	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Backs Ofestory	of Debugan	aton 8	fa the control of the	•	ntional B matour Re me sorre	De to lefting of the bob	tigation, of believe Cear fire Ath some	Sovikov'o f Bovikov tion of p acthor er than	stical and straight of the str	
		3	422	Construction of the Constructions of the Constructions of the Constructions of the Construction of the Con	mosti,	M. Porov.	1	At the social transfer of the social transfer	ig .	The state of the s	tractite for some	Investing a party of the same	Party Manageria e construction de construction	I. The frame of the control of the c	
	25(2)	derentet	Perodech	Peter.	A Land	Carlo Bonda	Oart 1/8 Candidate Referens	The said	TAKE OF CONTAINS	towardy, ribertion De of 12 Torile (e	To Control of the Con	berin, A.1 berretter be land of f.strade, I. make, I. ber 13pes la teres	Party and the party of the part	lov'yav, A. Artemotilas in A. Serios in A. The efficients to manipulation from the first in a first	
	356			i	Å	ä	ð.	8	7	AND THE S	10000	A STATE	E	ark o	1
-		-		 -								ä)			

RESHETOV, L.N., prof., doktor tekhn.nauk; FEDYAKIN, R.V., kand.tekhn.nauk

New type of meshing designed by M.L. Novikov for gear transmissions.

Elek. i tepl.tiaga 2 no.4:37-39 Ap '5%. (MIRA 12:3)

(Gearing) (Locomotives)

FEDYAXIN, R.V., kand. bkhn. muk; GHESNOKOV, V.A., kand. tekhn. nauk, dots.

Gear transmission with M.L. Novikov's meshes. Vest. mash. 38 no.4:
3-11 Ap '58.

(Gearing)

AUTHORS: Fedyakin, R.V. and Chesnokov, V.A., Candidate of Technical

Sciences

TITLE: The Design of Gear Transmissions of the M.L. Novikov Type

(Raschet zubchatoy peredachi M.L. novikova)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 5, pp 11 - 19 (USSR).

ABSTRACT: The sequence of design of the new novikov tooth form is discussed. The tooth profile consists of circular arcs but the tooth as a whole has a complex shape. The shape and load distribution of the contact area are assumed. Usually, a truncated elliptical area is the result of short teeth. A circular distribution over the middle portion of the tooth width is said to be typical. The case of point contact with an elliptical contact area is also considered. Geometric relations derived in the two authors' previous paper (Vestnik Mashinostroyeniya, 1958, Nr 4) are re-capitulated. The radii of curvature of the pinion and wheel teeth are computed. Linear contact along the tooth height gives the best load capacity. The contact stresses for this case are computed by means of the Hertz theory. Formulae are given for determining the radii of the equivalent cylinders. The calculation yields Cardl/3 a "reduced" radius and a "reduced" length of the equivalent

SOV/122-58-5-2/26

The Design of Gear Transmission of the M.L. Novikov Type

cylinder whose product, multiplied by the square of the permissible contact stress and by a numerical factor, gives the limiting tangential force transmitted by the tooth. The permissible contact stress is proportional to the Brinell hardness number and to the sixth root of the reciprocal number of load cycles. Gears so designed and tested under operating conditions are claimed to have exceeded the capacity of involute gears of the same size by a factor of 3 at an average peripheral speed of 12 m/sec. Gears running up to 60 m/sec were tested at the Nikolayevskiy mashinostroitel'nyy zavod (Nikolayevsk Engineering Works) showing a similar superiority. The helix angle has a substantial effect. The best results were obtained with a helix angle of about 15°. The design of the teeth for bending strength is based on a formula by which the bending stress is proportional to the tangential force and the tooth height and inversely proportional to the square of the root cross-section of the tooth. This follows from the application of a load which is uniformly distributed over the height of the tooth and elliptically over the length. Teeth of equal safety against bending and contact stresses are obtained by changes of profile but not by changes in module, Card2/3

The Design of Gear Transmission of the M.L. Nivokov Type

It is thought that at least three different basic profiles will be required to make full use of the potentialities of the new tooth shape. Details of bending strength analysis are given for convex and concave teeth. A safety factor of 2.5 is recommended. A very high strength of the new tooth form is claimed, supported by practical tests. The original teeth with both sides of the profile consisting of concentric circular arcs have excessive strength. After laboratory experiments assisted by train gauge measurements, the appropriate proportions were established for the tooth thickness and the root fillet radius. The tooth strength is determined mainly by the value of the profile shift, by the pressure angle and by the helix angle. A shift of 0.05 - 0.20 a pressure angle of 20 - 30 and a helix angle of about 12 appear to give best results. With the basic appear to give best results. With the basic parameters chosen, the geometric design of the tooth profile can be carried out. A detailed instruction and sequence of steps are given in the paper. There are 7 figures and 5 Soviet references.

Card 3/3 1. Transmission gears--Design

NOVIKOV, Mikhail Leont'yevich, doktor tekhn.nauk [deceased]. Prinimal uchastiye FEDYAKIN, R.V., kand.tekhn.nauk. CHESNOKOV, V.A., red.; YATSENKO, G.G., otv. za vypusk; SUKHAREVA, R.A., tekhn.red.

[New system of gear meshing] Novain sistems subchatogo zatmepleniia. Moskva, Mosk.dom nauchno-tekhn.propagandy im. F.M.

Dzerzhinskogo, 1959. 39 p. (Peredovoi opyt proizvodstva. Ser.

*Tekhnologiia mashinostroeniia, * no.27. Novye tekhnologicheskie protsessy]

(Gearing)

25(2)

SOV/25-59-11-10/38

AUTHOR:

Fedyakin, R.V.

TITLE:

A Wonderful Gearing

PERIODICAL: Nauka i zhizn', 1959, Nr 11, pp 24 - 28 (USSR)

ABSTRACT:

The author gives a general survey on the history of transmission gears and reviews in detail Novikov's gear. In spite of the high quality of involute toothed gears, in the past years their deficiencies became more and more obvious. They are of limited durability, give considerable loss in working capacity caused by friction, have an irregular distribution of loads in relation to the length of the teeth, and, above all, have a limited contact strength. By the end of WW II, M.L. Novikov proved the necessity of using a special differential (unlocked train gear) system of reduction gears; which ensures the greatest reliability and the lowest weight for turbo-prop engines. Nowadays, they are widely used in Soviet aviation and to an increasing extent abroad. Ways had to be found to considerably

Card 1/5

SOV/25-59-11-10/38

A Wonderful Gearing

increase the radii of the curvature and, consequently, of the dimensions of the contact spot on the lateral surface of the teeth. Taking into consideration these facts, M.L. Novikov developed a new spiral transmission. In distinction to the involute gears, the wheel tooth profile in the Novikov gear is formed either by circumferential curves or by smooth non-circumferential curves. One wheel has convex profiles and the other one concave. During the transmission, the teeth on one wheel roll over the teeth of the other contacting throughout their length. The given radii of the curvature are not measured in centimeters but in meters and dozens of meters. The most important advantage is the accord between the increased loading capacity and contact tension. The serially produced reducters with such gearing of the same dimensions as involute gears, are able to transmit efforts of a double to treble magnitude. The losses due to friction are half as much and wear and dynamic load are also lower

Card 2/5

SOV/25-59-11-10/38

A Wonderful Gearing

Novikov's gear can be used in many power transmissions. The angle of inclination of the teeth can be chosen ranging from 30 to 10, but the teeth cannot be of a spur type. Therefore, if the appearance of axial force is not desired, the transmission must be replaced by a double helical one. The new gears make it possible either to reduce the overall dimensions and the weight of the gears or to cease expensive cementation and grinding, retaining the same dimensions and weight or to use less resistant materials (plastics and aluminum alloys) the dimensions remaining unchanged. Novikov's gears are being used at the Novo-Kramatorskiy zavod (Novo-Kramatorskiy Plant), the Gorlovskiy mashinostroitel'nyy zavod imeni Kirova (Gorlovka Machine-Building Plant im. Kirov), the Zavod imeni 15-letiya LKSMU (Plant imeni 15-letiya "IKSMU") (Stalino), the Gor kiy avtozavod (Gor'kiy Automobile Plant) and the the Gor'kovs-Rostovskiy zavod po remontu dorozhnoy tekhniki (Rostov Plant for Maintenance of Roads). Besides this,

Card 3/5

SOV/25-59-11-10/38

A Wonderful Gearing

the gears are used for diesel engines, electric locomotives, drilling installations, excavators, cranes, ship mechanisms, etc. The Luganskiy zavod imeni Parkhomenko (Lugansk Plant imeni Parkhomenko) has started serial production of reducers with Novikov's gear, which makes it possible to reduce their weight by 1.5 to 2.5 times compared with involute reducers of the same capacity. This results in an annual saving of millions of rubles. The Mashinostroitel'-nyy zavod (Machine Building Plant) in Rostov on the Don has turned out reducers with Novikov's cylindrical and conical wheels for two years. A special nauchno-issledovatel'skaya laboratoriya pri voyenno-vozdushnoy Krasnoznamennoy ordena Lenina inzhenernoy akademii imeni Zhukovskogo (Scientific-Research Laboratory at the Red Banner Military-Aviation Engineering Order of Lenin Academy imeni Zhukovskiy) and a Koordinatsionnaya komissiya po zatsepleniyu Novikova pri Institute mashinovede-

Card 4/5

sov/25-59-11-10/38

A Wonderful Gearing

niya Akademii nauk SSSR (Coordination Commission for Novikov's Gearing at the Institute of General Engineering of the AS USSR) have been established. Presently, the USSR Gosplan is working out plans for wide introduction of Novikov's gears in various branches of industry. There are 6 drawings.

Card 5/5

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000412810

ACC NR. AP7001451

(N)

SOURCE CODE: UR/0413/66/CCO/021/0188/0188

INVENTORS: Fedyakin, R. V.; Chesnokov, V. A.

ORG: none

TITLE: A roller bearing. Class 47, No. 188231 Zannounced by Military Aviation Engineering Order of Lenin Krasnoznamennaya Academy im. Prof. N. Ye. Zhukovskiy (Voyenno-vozdushnaya inzhenernaya ordena Lenina Krasnoznamennaya Akademiya)

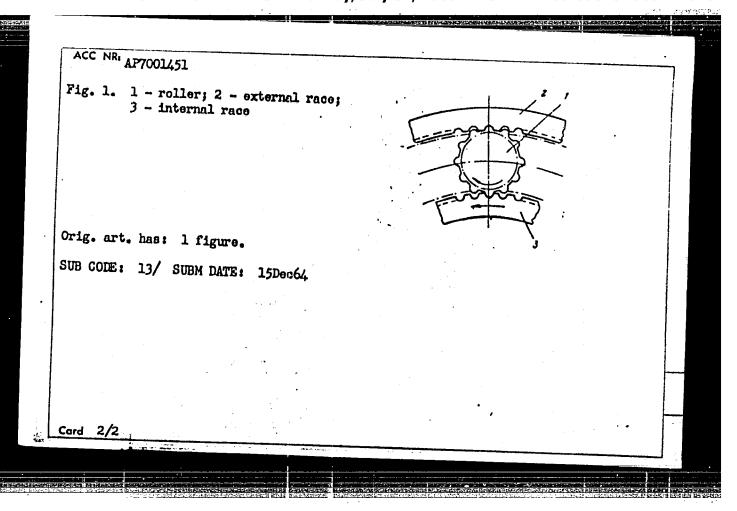
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 188

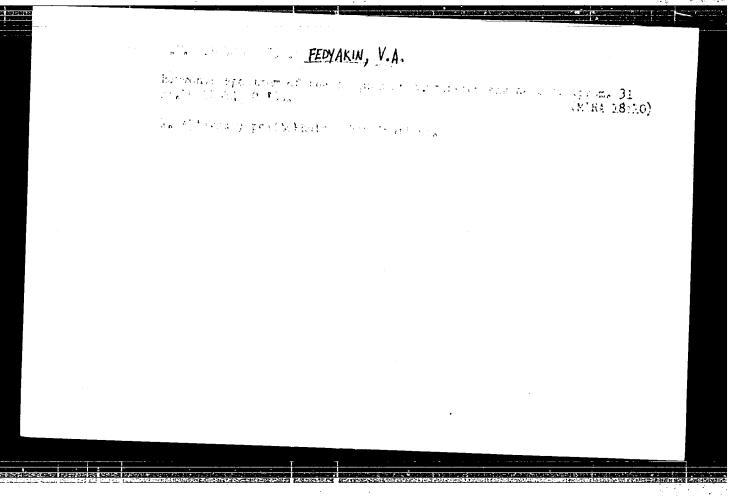
TOPIC TAGS: roller bearing, machine accessory, bearing race

ABSTRACT: This Author Certificate presents a roller bearing with grooved working surfaces of rings and rollers. To increase its load-bearing capacity and to diminish the noise it produces, the grooved working surfaces of rings and rollers are concave-convex and are identical in the rings and in the rollers (see Fig. 1). These grooves in the surfaces may be disposed in a herringbone pattern, may be curvilinear or

Card 1/2

VDC: 621.822.84





and the second s

Barashkov, G.K., Pedyakina, M.V.

Stand fouling by littoral algae in the Zelenetskaya Bay of the Barents Sea. Okeanologiia 5 no.5:897-902 *65.

(HIRA 18:11)

ZAPORSHCHIKOV, F.Ya.; PEDYAKINA, N.I.

Relationship of polar auroras, radio wave propagation and magnetic and ionospheric disturbances. Probl. Arkt. no.2:149-159 '57.

(Auroras)

(Auroras)

Lescopala de Mary

PHASE I BOOK EXPLOITATION

80V/5336

- Akademiya nauk SSSR. Mezhduvedomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. V razdel programmy MGG: Ionosfera
- Issledovaniya ionosfery (Ionospheric Research) Moscow, Izd-vo AN SSSR, 1960. 112 p. (Series: Its Sbornik statey, no. 5) 2,000 copies printed.
- Resp. Ed.: G.N. Gorbushina, Candidate of Physics and Mathematics; Ed.: A.D. Podol'skiy; Tech. Ed.: T.V. Polyakova.
- PURPOSE: This publication is intended for geophysicists, meteorologists, and communications specialists.
- COVERAGE: This collection of 12 articles on the ionosphere, published by the Soviet IGY Committee, presents some of the results of vertical soundings made at 23 graphic distribution of ionospheric absorption and its relation to solar flares and magnetic storms, the altitudinal distribution of ionization calculated with electronic computers, and ionospheric observations in the Arctic and Antarctic. An English resume accompanies each article. No personalities are mentioned. References follow individual articles.

Card 1/4_

Ionospheric Research	SOV/5336
TABLE OF CONTENTS:	
Foreword	5
Besprozvannaya, A.S. Anomalous Absorption in the Polar Reto Observations Conducted by the Method of Vertical Ionosy	egion According pheric Sounding 7
Fedyakina, N.I. Anomalous Absorption in May and July 1959 tions in Tiksi Bay by the Method of Cosmic Radiation	According to Observa-
Gorbushina, G.N. Some Results of the Measurement of the A Waves in the Ionosphere	absorption of Radio
Kuchuberiya, I.Kh. Quantitative Estimation of Ionospheric According to the Minimum Reflection Frequency	: Absorption 41
Kerblay, T.S. Dependence of the Maximum Frequencies of the Es Layer on the Characteristics of the Ionosonde System	e Sporadic 50
C ard 2/4	

FEDYAKINA, N.I. Inclined sounding in the 19-39.5 Mc frequency band on a line 1,600 km long at high latitudes. Trudy AANII 256:117-122 '61. (Sporadic E (Ionosphere)) (Ionospheric radio wave propagation)

ACC NR. AP7000533 SOURCE CODE: UR/0386/65/004/010/0500/0395 26 AUTHOR: Dubovoy, L. V.; Dyatlov, V. D.; Fedyakov, V. P. ORG: none ' TITLE: Ion cyclotron resonance in a dense plasma with hot electrons SOURCE: Zhurnal eksperimental noy i teoreticheskoy fiziki. Pis ma v redaktsiyu. Prilozheniye, v. 4, no. 10, 1966, 388-393 TOPIC TAGS: plasma heating, plasma temperature, cyclotron resonance, electron temperature, ion energy ABSTRACT: The authors) report results of an experimental investigation of the properties of a dense plasma with preheated electrons in the ion-cyclotron resonance region. The experiments were made in a magnetic mirror trap. The electrons were heated by a direct turbulent discharge. The apparatus and the method of producing the hotelectron plasma were described earlier (Dokl. AN SSSR v. 167, 553, 1966). In the first part of the investigation, the cyclotron absorption of the energy of the probing high-frequency fields was used to measure the parameters of the ionic components of the plasma. These tests disclosed the presence of a narrow region (near 4.75 kOe) corresponding to single-particle resonance for hydrogen atoms, and the presence of absorption bands at stronger fields, connected with ion-cyclotron wave generation. The results suggest that the electrons escape the trap, but their temperature remains constant. In the second part of the experiment, an attempt was made to heat the ions Card 1/2

		· •						O	
enerated illograms ook place he decay	in the of the in the time of to be	et of powerf plasma a rap diamagnetic plasma, the the plasma approximately	idly dissipe effect in t absorbed er with approxi	ting cyclo the plasma tergy amour tmately equ	otron wave showed clo nting to ~1 wal ion and	of large early that kev per lelectror	amplitude ion head ion. How tempera	le. Os- uting owever, utures	1
SUB CODE:	20/	SUBM DATE:	02Aug66/	ORIG REF	001/	OTH REF:	002		
								14	
				•					
					-				
									L

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000412810

 L 29529-66 EWI(1/EIC(f) iJF(e) AT	— i									
ACC NR: AP6011653 SOURCE CODE: UR/0020/66/167/003/0553/0555	.									
AUTHORS: Dubovoy, L. V.; Fedyakov, V. P.	·									
ORG: none										
TITLE: On the confinement of a high temperature plasma in a trap with magnetic mirrors										
SOURCE: AN SSSR. Doklady, v. 167, no. 3, 1966, 553-555										
TOPIC TAGS: high temperature plasma, plasma confinement, magnetic trapping, magnetic mirror, turbulent plasma, plasma heating										
ABSTRACT: The authors measured the confinement time of a plasma with hot electrons in a mirror-type trap (probkotron). The trap was filled with high temperature particles by the method of turbulently heating the plasma with a direct discharge, described by M. A. Babykin et al. (ZhETF v. 47, 1957, 1964). The experiments were made in a quartz tube 1.2 meters long and 12 cm in diameter, in deuterium, at a gas pressure										
1 2 x 10 ⁻⁵ mm Hg. The longitudinal magnetic field in the homogeneous part of the trap ranged from 2 to 10 kOe at a constant mirror ratio 1.5. The field half cycle was 6 msec long. The direct discharge current was										
Card 1/2 UDC: 533.9.16 + 533.9.951.8										

L 29529-66 ACC NR AP6011653 0 applied at the maximum of the magnetic field. The discharge current could be varied from 1 to 45 ka, with a half-cycle duration of 5 µsec. The results show that with increasing electron temperature the time of plasma confinement increased monotonically, reaching values of the order of 1 millisecond at a temperature of 10 eV. The relative change in the longitudinal magnetic field reached a maximum of 0.04, corresponding to an electron temperature of 10 -- 20 kev. Satisfactory agreement is obtained between the measured and theoretical values. It is concluded that further research on turbulent heating of plasma in a direct discharge with subsequent capturing of the plasma in magnetic traps of different types can lead to promising results with respect to plasma containment. This report was presented by Academician Ye. K. Zavoyskiy 30 June 1965. Orig. art. has: 3 figures. SUB CODE: 20/ SUBM DATE: 17Jun65/ ORIG REF: 001/ 2/2 LS . Card

FEDYAKOVA, 3. G.

FA 67/49T13

USSR/Chemistry - Analysis, Physicochemical Kinetics

Aug 49

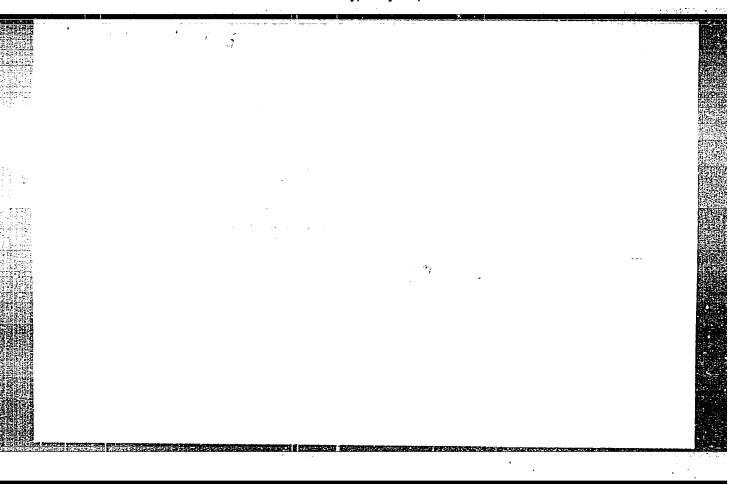
"The Kinetic Method of Physicochemical Analysis: VI, Kinetics of the Catalytic Decomposition of Hydrogen Peroxide on Alloys," V. A. Shushunov, E. G. Fedyakova, Sci Res Inst of Chem, Gor'kiy State U, 51 pp

"Zhur Fiz Khim" Vol XXIII, No 8, p. 934

Decomposition of $H_2\theta_2$, catalyzed by the metals Bi, C4, Sb, and Sn and alloys of these four, conforms to the rule for monomolecular reactions. The energy of activation for the monomolecular reactions. The energy of activation for the decomposition of $H_2\theta_2$ on alloys of Bi Sn is invariably proportionate to the increase in the concentration of Sn in these allowy. The cutectic is not shown in the curv for the energies of activation and the compositions of the catalyst, Stable intermetallic compounds of CdSb have maximum catalytic activity and minimum energy of activation. Shows the curves expressing the energy of activation and the composition of CdSb compounds. Submitted 26 Nov 48

PA 67/49^T13

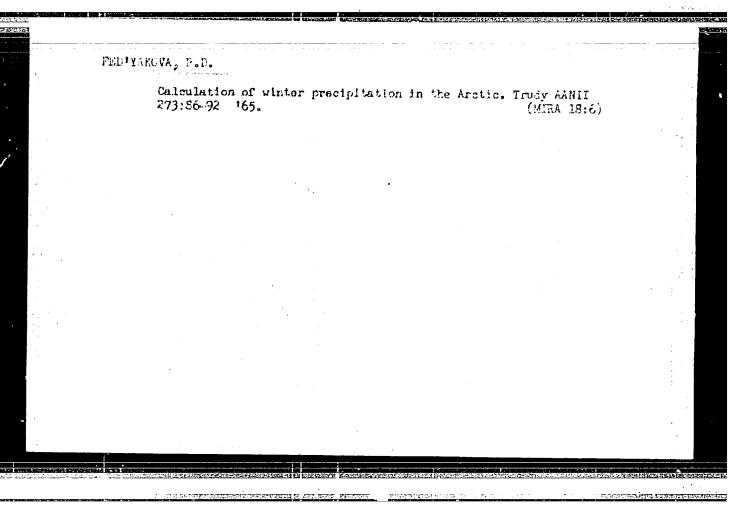
- nome checked in original



TAVIDY, A.M.: COE 1507, N.A.; PROTARCYA, K.G.; CHRONICOT, V.A.

Conditions for the proparation of pure entering expansion.
Zhan. prikl. khim. 37 no.10:2140-2145 6 144.

(Edita 17:11)



				Ĭ
1;	BULGAKOVA, V., FEDYANEV, V.			
2.	U3SR (600)			
4.	Meat Industry			
7.	Cooperation of science and production.	Mias. ind.	24, No. 1, 1953.	·
	,			
				·

9. Monthly List of Russian Accessions, Library of Congress, 1953, Unclassified.

L 10268-67 EWT(m)ACC NR: A27003092 SOURCE CODE: UR/0380/66/000/004/0107/0113 AUTHOR: Fedyanin, A. I. (Dushanbe) ORG: none TITIE: Methods for improving the running in of friction bearings SOURCE: Mashinovedeniye, no. 4, 1966, 107-113 TOPIC TAGS: antifriction bearing, cast iron ABSTRACT: An analysis of methods for decreasing the time and effort required to "run in" friction bearing surfaces. Methods analyzed include: employing intensive wear forms in the run-in period, including extra high speed run-in; filling the depressions in uneven material surfaces with other material which runs off of or is worm down over high spots; high quality material finishing to reduce unevenness before fitting. In all, the authors recommend the first method. The authors performed investigation with austenitic manganese iron, annualed and non-annualed; modified austenitic iron; pearlite iron, and annealed steel type 45G2. The materials were run-in without lubricant, with lubricant containing abrasive and with sulphur-containing lubricants. It was found that addition of 5% sulphur to the oil reduced the run in time by over 250 times for pearlite, 5 times for cast iron and 12 times for annualed iron. Particle size must be < 2 microns. This was found to be more effective than sulphiding the friction surfaces. A gradual increase in rotation speed and load also reduced the run-in time. The experiments showed that austenitic manganese iron in the run-in state works better than sulphur poarlite iron____ and tin bonds. Orig. art. has: 4 figures and 3 tables. [JPRS: 38,228] SUB CODE: 13 / SUBM DATE: 26Sep65 / ORIG REF: 008

FEDYANIN, A.T., inzh.

Using sulfur for rapid working-in of friction surfaces. Vest. mashinostr. 44 no.10:44-46 0 164. (MIRA 17:11)

Running-in of sliding bearings is a means of increasing their durability. Stroi. i dor. mash. 10 no.6:35-37 Je 'no. (MTHA 18:8)

KUZMIN, G.P.; ZHARKOV, M.M., nauchnyy sotrudnik; ZHUKOV, B.A., nauchnyy sotrudnik; KLIMOV, N.A., nauchnyy sotrudnik; LEONT'YEV, V.N., nauchnyy sotrudnik; FEDYANIN, A.S., nauchnyy sotrudnik

Testing the combined chamber-shield method for mining thick steep coal seams in the "Taybinskaya" Mine. Ugol; 34 no.9:46-50 S 159. (MIL: 12:12)

1. Glavnyy inshener tresta Kiselevskugol' Kusnetskiy basseyn (for Kus'min). 2. Institut gornogo dela Sibirskogo otdeleniya AN SSSR (for all except Kus'min).

(Kusnetsk Basin--Coal mines and mining)

GORDACHEV, T.F.; FUDYART , A.S.

Hydraulic mining of thick steep beds by the sinking block method. Izv. Sib. otd. AN SSSR no.9:13-20 161.

(MIRA 14:10)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR, Novosibirsk.

(Hydraulic mining)

ACC NR: AP7006471

SOURCE CODE: UR/0415/66/000/004/0019/0028

AUTHOR: Fedyanin, A. S.

ORG: Institute of Mining SO AN SSSR, Novosibirsk (Institut gornogo dela SO AN SSSR)

TITLE: Results of research on the pressure exerted by rubble on enclosing surfaces

SOURCE: Fiziko-tekhnicheskiye problemy razrabotki poleznykh iskopayemykh, no. 4,

TOPIC TAGS: pressure effect, mining engineering, pressure distribution

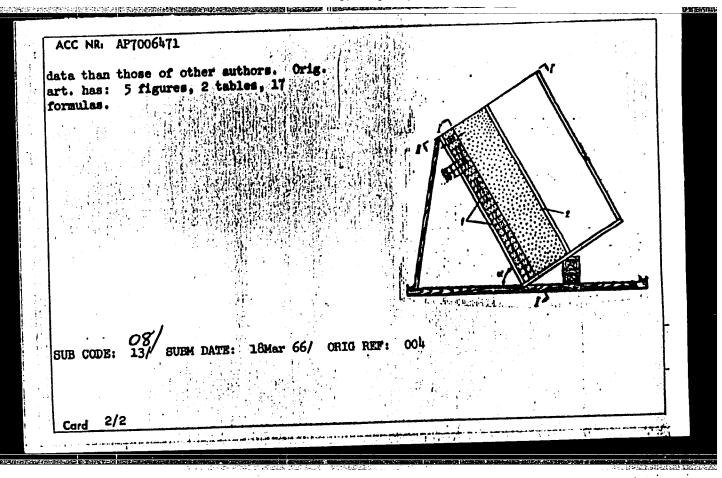
ABSTRACT: Experimental and analytic data are given on the pressure resulting from brash located in waste regions of mines. A waste was simulated in laboratory studies on a stand (1.5×1.5×1.0 m). The unit was designed so that the slope and size of the space could be varied. The lateral pressure of particulate material was measured by 20 dynamometric platforms (100×50 mm) mounted on the side wall in a row 1 m from the base (see figure). Each platform was an electric dynamometer with 4 resistance pickups. Formulas are given for determining the pressure of a particulate mass on a unit of surface in terms of the components of force parallel and perpendicular to the given layer. These formulas may be used for determining the distribution of pressure due to rubble against the bottom and enclosing walls of a waste for a layer of any thickness and dip angle. Comparison shows that these formulas give values closer to experimental

<u>Card</u> 1/2

WDC: 622.834.E

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000412810



SOV/123-59-15-60510

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 230 (USSR)

AUTHOR:

Fedyanin, B.I.

TITLE:

Continuous Conveyer Line for the Cleaning of Castings

PERIODICAL:

Byul. tekhn.-ekon. inform. Sovnarkhoz Khar'kovsk. ekon. adm. r-na, 1958,

Nr 3, pp 32 - 37

ABSTRACT:

Cf. RZhMash, 1959, Nr 3, 9488

Card 1/1

AUTHOR:

Fedyanin, B.I., Engineer

307-117-56-10-15/35

TITLE:

Pneumatic Turbovibrators (Pneumaticheskiye turbovibratory)

PERIODICAL:

Mashinostroitel, 1958, Nr 10, pp 20 - 22 (USSR)

ABSTRACT:

Pneumatic plunger vibrators are largely used in foundries to push apart models and core boxes, pushing out models and cores and for other purposes. These vibrators quickly wear out in operation without lubrication, while the operating surfaces exposed to the humidity-saturated air easily corrode. B.I. Fedyanin and A.P. Khrol', laborers of the Khar'kovskiy traktornyy zavod (Khar'kov Tractor Plant) suggested an inertia pneumatic turbovibrator (fig. 1) which is laid down in patent specification Nr 109731. It has a simple design and the parts are not subject to friction. The pneumatic turbovibrator can be used instead of the present plunger vibrators in all foundries. There is 1 diagram.

1. Vibrators-Design 2. Foundries-Equipment

Card 1/1

				•	725	.	. 2 8	4	8	3	2 Z	ដ	123	127	, <u>s</u>	8		56	3;	2	
		Methanizatalya i avtomatizatalya trudoyomkikh proiteesov v liteyn proivodstve (Methanization and Automation of Labor-consuling Prooteese in Fundry Practice) Moscow, Mangis, 1959. 226 p. Errata alla izaerida. 4,000 copies printed.	Merissent E. R. Stobnikov, Candidate of Technical Sciences: Ed. (fille page): G. L. Kobylyanskiy (Decessed): Ed. (Lasia book): A. E. Scholov, Candidate of Echnical Sciences: Technical Sciences: Technical of Pagestal Sciences: Technical of Sciences: Technical of Sciences on the Technical of Sciences Annulacians (Lemingrad Division, Maskis). Zen. P. Memmer, Raniforiare (Lemingrad Division, Maskis).	POGE: The book is intended for technical personnel in foundries and engineers engaged in the mechanization and automation of intential processes. It may also be used by students of in- situations of higher technical education.	In the mechani- g operations in and sutcastion I presented	Service of the control of the contro	euch nuch nuch tr	foundings. Most of the metarial is based on experiments and work done at the "Krampy Akasy" Plants. Some of the methods described appear to be in the experimental stage at that plant. The technical papers published in this book ways originally presented at a technical conference of the Soviet methods.	7	T GETLYY	5		th.		Akeay			4	e puno		
	301/2831	19.59	lo lenosii lenosii ture	sel in itomati idente	The state of the s	A LEGAL	i de	10.00	Rachine for Casting	Petralia, B. L. Bytrosachanical Unloader for Apron Conveyors Patralia, B. Wilding Mahlines at the Man'itorsity Traktorupy	for Cleaning Castings	Pedvanin, B. I. Mechanization of Weight Loading of Rolds in *Conveyor-appear Foundates	Durar E. Bechanization of Loading and Uniceding of Weights on Conveyors in the Transpy Assay ? Plant	.	Ç.	Conveyors 2, 2, Semiautomatic Shakeout of Molds on Casting	Durger, H. I. Prematic Sand-blowing Machine for coremating the "Krashy" hissy" Plant	Pedymin B. I. Automatic Distribution of Molding Compound Into Table With Theumatic Control	Fril'shidana. La. M. Automatic Distribution of Roiding Compound Info Tanks of Molding Machines		
	304		2 1 2 1 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2	TO THE PERSON NAMED IN COLUMN TWO IN COLUMN	sents negating tion	P C C C C C C C C C C C C C C C C C C C			ē	Rovaki	leen in	£ 04 E	Julpe	A Mate	the "framyy	E 6	5	ld ing	Rol Alp	tor	
i	ie tom	A STATE OF THE PARTY OF THE PAR	1000	ntion!	Der Le	1 1 2		The state of the s	2	F	for D	1 2	d Unio	Liqui	*	10 To 1		95 No.	98 of	041bra	
	PHASE I BOOK EXPLOITATION	Auto Nosod Ples	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	the the	A THE			1 61 8 1 61 8	V Petrania, B. L. Semintomatic Turn table	Londer it the	kov Tractor Flant)	icht	34	X Pedrania, B. I. Rechanization of Fouring Liquid Retal	Durner, H.I. Automatic Shakeout of Molds at Tlant	ie out	2	ut lon	T BE	I. Preumatic Inertial Turbovibrator	
-	M 100	etys t tige)	Candid Lyanak Manak Manak	an in in	the second			A THE	T T	the del		7 Jo 1	A Control	0 0	ort of	daft o	1010-1	letrib entrol	C Dist	nertla	
		Tree of the contract of the co	Part and a series	in tend in the	A STATE OF THE STA	A Ballo Constant	The state of the s	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	tome t	chanle 6 Nach	oue Co	Ention	ton of	Eatlor	Shake	tomet	A SEP	tie C	Nachti	it to I	
	¥	avtoe Rechar	Sokoli Sokoli Machine	No of the party of	tomiti	te div	i in i	5 1 2 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		Tydrom.	ractor ont in	oundr.	and za	lechan!	ome t to	2		Auto.	A. Au	7. a	
1	_	in the state of th	# 64 P	SEE'S	gig a	¥ 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		4 6 4	1	1	١	-	1	4	I. Aut	-	- 1	#	1 10		
	28(1);25(1)	olivot conse		Me en contract of the contract	COVERAGE: sation foundrib of foun	The state	100	1973		191	Tated (Blank	347.2		1	7	min.		畫	Take .	Ppdyanin, B.	
2	28(1)	i i	i i i i i i i i i i i i i i i i i i i	Punpost:	8	225	KE 434	4 4 4 F E			Pedya	Ye dra	400	5	がか	3	75	華	IT	2	
4		•								Ĭ	٠. ٨	اور دیا د	٦	×	,-			_			
•				1		:			1 —			/	•								
	<u> </u>		/	<u></u>		` \					_	-/ R		•			<u>. </u>				

· 25(7)

307/117-59-7-13/28

AUTHOR:

Fedyanin, B. I.

TITLE:

High-Productivity Molding Machines

PERIODICAL:

Mashinostroitel', 1959, Nr 7, pp 28-30 (USSR)

ABSTRACT:

The article gives detailed information on the design and operation of the new jolt-molding machines "VVF-2,5" and "VPF-2,5", designed and constructed under the direction of the author at the Khar'kovskiy tractornyy zavod (Khar'kov Tractor Plant), and installed in the plant's new foundry. Both machines are pneumatic and pack a moulding box in 15 to 20 strokes of the jolting table. The table of the "VPF-2,5" can be turned in 2 or 3 seconds. The mechanisms for jolting and pulling out the pattern are of the same design in both machines, and the "VPF", which is for bottom mold boxes, can easily be turned into a "VVF" machine for up er mold boxes. The packed mold box is lowered on to a carriage, running on rails under the table, and, after the pattern is ex-

Card 1/2

S0V/117-59-7-13/28

High-Productivity Molding Machines

tracted by means of a hydraulic device, the carriage carries it away. The control column of the machine is placed to one side of it. There are 2 diagrams.

Card 2/2

18(0), 12(1,2)

SOV/128-59-9-7/25

AUTHOR:

Ridnyy A.A. and Fedyanin B.I., Engineers

TITLE:

New Types of Foundry Equipment of the Khar'kov Trac-

tor Works

PERIODICAL:

Liteynoye proizvodstvo, 1959, Nr 9, pp 21-26 (USSR)

ABSTRACT:

At the Khar'kov Tractor Works there are many innovations in foundry equipment that satisfy not only the needs of the Works, but serve also in good stead other plants in the Soviet Union. To these innovations, first of all, belongs a conveyor line with its components serving for cleaning and finishing of castings (Figure 1). The line was put in operation in January 1958. Its turning-out capacity is 8 to 10 tons an hour of castings weighing up to 40 kg. The line is equipped with a drum for extracting of cores from the castings and for a preliminary cleaning of them (Figure 2). Another drum - DB4 shot-missile used on the line is an assembly of several designs; it comprises a movable hearth, an elevating device, shot-missile turbines, and an outfit for the separation and cleaning of shot (Figures 3,4 and 5). Tech-

Card 1/3

New Types of Foundry Equipment of the Khar'kov Tractor Works

nical specifications of the drum are as follows: size (length x width x height) 4.7 x 3.4 x 4.9 m; diameter of the working part - 120 cm; rotation speed of the movable hearth - 5 m a minute; number of shot-missile turbines - 4; maximum output of a turbine - 130 kg of shot a minute; electric power required for turbine drive - 14 kw; for hearth - 10 kw; for elevator - 4.5 kw; for sieve - 0.6 kw; drum weight - 12.3 tons. Another outfit deserving attention is the vibration-pressing core machine VPS-7 (Figure 7). It is intended for forming of large-size cores weighing up to 150 kg. In this machine, all technological operations, except the laying of armature and drying slab, are mechanized. The process of vibration-pressing, which lasts 10 seconds, considerably increases the productivity in forming of cores, as compared to that rendered by machines of shake-type. A unified pneumatic system incorporated in the machine makes it simple in construction and reliable in operation. In conclusion, the author of this article describes the pneumatic drive turning switch with distant control,

Card 2/3

New Types of Foundry Equipment of the Khar kov Tractor Works

to be used on single-rail tracks having many a branch (Figures 8 and 9). Its use permits saving of labor of the workers who, otherwise, have to operate the switches at transporting of molten metal. There are 9 diagrams.

Card 3/3

Continuous line for cleaning castings. Mashinostroitel' no.9:23-25 S '59. (MIRA 13:2) (Iron founding) (Shot peening)

Mechanization of the cleaning of castings at the Kharkov Tractor Plant. Mekh.i avtom.proizv. 14 no.2:13-16 F '60.

(MIRA 13:5)

(Kharkov--Tractor industry--Technological innovations)

AKHTYRSKAYA, T.1.; PEPENKO, V.D.; FEDYANIN, B.I.

Small batch production of molds on a sand slinging and squeezy molding mathine. Lit. proizv. 5:21-23 My '64. (MIRA 18:3)

FEDYANIN, B.I.; AKHTYRSKAYA, T.I.; PEPENKO, V.D.

Compacting large molds by pressing. Lit.proizv. no.7:15-16 J1
'62.

(Machine molding (Founding))

FEDYANIN, B.I., inzh.; AKHTYRSKAYA, T.I., inzh.; PEPENKO, V.D., kand. tekhn. nauk

Pressing large molds. Mashinostremie no.3:32-35 My-Je 163.

1. Khar'kovskiy filial instituta avtomatiki.
(Molding machanes)

BRAYNES, S.N., prof., red.; NAPALKOV, A.V., red.; KONEV, S.V., red.; KORZHOV, V.A., red.; FEDYANIN, G.P., red.; KOBRINSKAYA, O.Ye., red.; KUCHINA, Ye.V., red.

[Problems in experimental pathology; collection of articles from the experimental pathology laboratory] Voprosy eksperimental noi patologii; sbornik rabot laboratorii eksperimental noi patologii. Pod obshchei red. S.N.Brainesa. Moskva, 1959. 339 p.

(MIRA 14:2)

1. Akademiya meditsinakikh nauk SSSR. Institut psikhiatrii. (NERVOUS SYSTEM--DISEASES)

FEDYAMIN, 1. P.

Exhibition of the Achievements of the National Economy in 1965. Inform.biul.VDNKH no.1:1-3 Ja '65. (MIRA 18:3)

1. Direktor Vystavki dostizheniy narodnogo khozyayatva SSSR.

VERNYY, Ye.; PEDYANIN, M.

The operation of the hourly bonus system. Sots.trud no.8:78-80 Ag '56. (MIRA 9:10)

1. Nachal'nik planovo-ekonomicheskogo otdela Kasanskoy Teplovoy elektricheskoy tsentralinoy stantsii no.l (for Fedyanin). 2.Starshiy inshener (for Fedyanin).

(Electric power plants) (Bonus system)

BOBYREV, N.A.; FEDYANIN, O.I.

Localization of the breakdewn of a heavy-current discharge by a transverse magnetic field. Zhur. tekh. fiz. 31 no.11:1309-1316 N '61. (MIRA 14:11)

1. Fizicheskiy institut imeni Lebedeva, Moskva.
(Breakdown, Electric)
(Electric discharges through gases)
(Magnetic fields)

BOBYREV, N.A.; FEDYANIN, O.I.

Study of the initial stage of a heavy-current electrodeless discharge. Zhur. tekh. fiz. 31 no.11:1317-1323 N '61. (MIRA 14:11)

1. Fizicheskiy institut imeni Lebedeva, Moskva.
(Electric discharges through gases)

S/057/62/032/007/005/013 B104/B102

24.2120

AUTHORS:

Bobyrev, N. A., and Fedyanin, O. I.

TITLE:

Effect of an external longitudinal magnetic field on the dynamic stabilization of a cylindrical gas conductor

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 7, 1962, 823-826

TEXT: The dynamic stabilization of a plasma filament in the presence of an external longitudinal magnetic field is studied. The contribution of the transverse field to the pressure balance is neglected. $\frac{(H^2 / (H_{CP}^2 + H_{ZP}^2) \ll 1) }{(H_{CP}^2 + H_{ZP}^2) \ll 1}$ The conductivity of the plasma is assumed to be infinite, and the disturbances are assumed to be small as compared with the radius r_0 of the cylinder. These assumptions permit the use of expressions derived by N. V. MacLachlan (Theory and Application of Mathieu Functions, IL, M., 1953) for the forces acting on a deformed conductor. The stability of the principal deformation types (necking-in and bending) is studied. There are 5 figures.

Card 1/2

S/057/62/032/007/005/013
Effect of an external longitudinal ... B104/B102

SUBMITTED: August 4, 1961

Card 2/2

BOBYREV, N.A.; FEDYANIN, O.I.

Stabilization of a current-carrying cylinder by means of a high-frequency magnetic field. Zhur. tekh. fiz. 33 no.10: 1187-1192 0 '63. (MIRA 16:11)

EFT(1)/EPF(n)-2/ErG(m)/EPA(w)-2L 01292#66

ACCESSION NR: AP5021732

UR/0386/65/002/002/0079/008

Fedyanin, O. I.; Khol'nov, Yu. V.

TITLE: Effect of toroidal drift on the injection of plasma across a magnetic SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.

Prilozheniye, v. 2, no. 2, 1965, 79-83

TOPIC TAGS: plasma physics, plasma magnetic field, MHD flow

ABSTRACT: Experiments were conducted for studying the motion of a plasma in a toroidal magnetic field. A toroidal stainless steel vacuum chamber was used (major diameter 120 cm, minor diameter 10 cm). This chamber was placed in the magnetic system of a sectionalized solenoid which generates a quasistationary field (maximum field strength \u2013000 oe, half-cycle \u20122\u201310^3 sec). Two spark sources were used for plasma injection located in the plane of the torus at one azimuth (ϕ = 0). The injectors give different directions for the initial velocity of the plasma stream: for the inside injector, $v_{\rm pl}$ is parallel to ∇H^2 ; for the outside injector, $v_{\rm pl}$ is antiparallel to ∇H^2 . The plasma flux in this trap was measured by screened electric probes at ϕ = 45 and 135°. It was found that the flow of the plasma injected from

Card 1/2

L 01292-66

ACCESSION NR: AP5021732

the outside source at 45° azimuth has a bell-shaped distribution with a maximum shifted toward the outside. When the plasma is injected from the inside source, the number of particles which pass the 45° azimuth is considerably less than for the outside source, and the distribution corresponds to the ordinary distribution of a plasma in a toroidal magnetic field due to toroidal drift. With continued motion in the toroidal field, the plasma "drifts" to the outside wall of the chamber. This is probably due to the effect of the conductive boundary of the chamber. Graphs are given for the particle distribution, "In conclusion, the authors consider it their pleasant duty to thank M. S. Rabinovich and I. S. Shpigel for useful consultation, and N. V. Perov and V. M. Zykov for assistance in preparing and conducting the ex-

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics ASSOCIATION: Illicingship medical associations and association of Sciences association (19,55)

SUBMITTED: 27May65

ENCL: 00

SUB CODE: ME

NO REF SOV! 003

OTHER!

001

L 59621-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/P1-4 IJP(c) WW/FM/AT ACCESSION NR: AP5012466 UR/0089/65/018/004/0329/0335 4/2 533.9

AUTHOR:

Fedyanin, O. I.

TITLE: Experimental investigation of the injection of a plasma

into a programmed magnetic field

SOURCE:

Atomnaya energiya, v. 18, no. 4, 1965, 329-335

TOPIC TAGS: plasma injection, plasma pinch, plasma diagnostics, programmed magnetic field, plasma trapping

ABSTRACT: The purpose of the experiment was to study the possibility of transverse injection in a programmed magnetic field, by making use of irreversible processes in a plasma which is compressed by a rapidly growing magnetic field. The magnetic system consisted of two parts, a solenoid producing a quasi-constant magnetic field (half-period of 4 msec), and two compensating loops, which produce time and space modulation of the field in the injection region. The

Card 1/3